

**IN THE CLAIMS**

Claims 1-31. (canceled)

32. (previously presented) Medical product the surface of which comprises at least partially a polymer layer, wherein the polymer layer consists of at least 25 % by weight of substances participating in the polymerization reaction and the polymer layer comprises substances, wherein the substances participating in the polymerization reaction contain a linear or branched and a substituted or non substituted alkyl moiety with at least one multiple bond and the substances participating in the polymerization reaction are capable of auto-polymerization.
33. (previously presented) Medical product according to claim 32, wherein the alkyl moiety containing at least one multiple bond has 7 to 50 carbon atoms.
34. (previously presented) Medical product according to claim 32, wherein the substances containing at least one alkyl moiety with at least one multiple bond are covalently linked with each other via polymerization of the at least one multiple bond.
35. (previously presented) Medical product according to claim 32, wherein the substances containing at least one alkyl moiety with at least one multiple bond are chosen from the group comprising fatty acids, fatty acid esters, fatty acid derivatives, ethers, diethers, tetraethers, lipids, oils, fats, glycerides, tri-glycerides, glycol esters, glycerin esters as well as mixtures of the aforementioned substances.
36. (previously presented) Medical product according to claim 35, wherein in the case of the lipids mono- or poly-unsaturated fatty acids and/or mixtures of these unsaturated fatty acids in the form of their triglycerides and/or in non glycerin bound, free form are concerned.
37. (previously presented) Medical product according to claim 36, characterized in that the unsaturated fatty acids are chosen from the group comprising oleic acid, eicosapentaenoic

acid, timnodonic acid, docosahexaenoic acid, arachidonic acid, linoleic acid,  $\alpha$ -linolenic acid,  $\gamma$ -linolenic acid as well as mixtures of the aforementioned fatty acids.

38. (previously presented) Medical product according to claim 35, characterized in that in the case of the oils linseed oil, hempseed oil, corn oil, walnut oil, rape oil, soy bean oil, sun flower oil, poppy-seed oil, safflower oil, wheat germ oil, grape-seed oil, evening primrose oil, borage oil, black cumin oil, algae oil, fish oil, cod-liver oil and/or mixtures of the aforementioned substances are concerned.
39. (previously presented) Medical product according to claim 38, characterized in that the oils and the mixtures of the oils, respectively, contain an amount of at least 40% by weight of unsaturated fatty acids.
40. (previously presented) Medical product according to claim 32, characterized in that the substances not participating in the polymerization reaction comprise saturated fatty acids, saturated fatty acid esters, saturated fatty acid derivatives, saturated ethers, saturated lipids, lipoids, saturated fats and oils, saturated glycerides, saturated triglycerides, saturated glycol esters, saturated glycerin esters, waxes, biostable or biodegradable polymers or mixtures of the aforementioned substances.
41. (previously presented) Medical product according to claim 40, characterized in that in the case of the saturated fatty acids the long-chain fatty acids beyond a chain length of 12 carbon atoms as well as mixtures thereof and/or natural lipoids such as palm kernel fat, coconut fat as well as their mixtures are concerned.
42. (previously presented) Medical product according to claim 40, characterized in that in the case of the waxes beeswax, carnauba wax, candelilla wax and/or mixtures thereof are concerned.
43. (previously presented) Medical product according to claim 40, characterized in that the biostable polymers are chosen from the group comprising polyacrylic acid and polyacrylates such as polymethylmethacrylate, polybutylmethacrylate, polyacrylamide,

polyacrylonitriles, polyamides, polyetheramides, polyethylenamine, polyimides, polycarbonates, polycarbourethanes, polyvinylketones, polyvinylhalogenides, polyvinylidenhalogenides, polyvinylethers, polyvinylaromates, polyvinylesters, polyvinylpyrrolidones, polyoxymethylenes, polyethylene, polypropylene, polytetrafluoroethylene, polyurethanes, polyolefine elastomers, polyisobutylenes, EPDM gums, fluorosilicones, carboxymethylchitosanes, polyethyleneterephthalate, polyvalerates, carboxymethylcellulose, cellulose, rayon, rayontriacetates, cellulosenitrates, celluloseacetates, hydroxyethylcellulose, cellulosebutyrates, celluloseacetatebutyrates, ethylvinylacetate copolymers, polysulphones, epoxy resins, ABS resins, EPDM gums, silicones such as polysiloxanes, polyvinylhalogenes and copolymers, celluloseethers, cellulosetriacetates, chitosanes and copolymers and/or mixtures of these substances.

44. (previously presented) Medical product according to claim 40, characterized in that the biodegradable polymers are chosen from the group comprising polyvalerolactones, poly- $\epsilon$ -decalactones, polylactides, polyglycolides, copolymers of the polylactides and polyglycolides, poly- $\epsilon$ -caprolactone, polyhydroxybutanoic acid, polyhydroxybutyrates, polyhydroxyvalerates, polyhydroxybutyrate-co-valerates, poly(1,4-dioxane-2,3-diones), poly(1,3-dioxane-2-one), poly-para-dioxanones, polyanhydrides such as polymaleic anhydrides, polyhydroxymethacrylates, fibrin, polycyanoacrylates, polycaprolactonedimethylacrylates, poly-b-maleic acid, polycaprolactonebutyl-acrylates, multiblock polymers such as for example from oligocaprolactonedioles and oligodioxanonedioles, polyetherester multiblock polymers such as for example PEG and poly(butyleneterephthalates), polypivotolactones, polyglycolic acid trimethyl-carbonates, polycaprolactone-glycolides, poly(g-ethylglutamate), poly(DTH-iminocarbonate), poly(DTE-co-DT-carbonate), poly(bisphenol-A-iminocarbonate), polyorthoesters, polyglycolic acid trimethyl-carbonates, polytrimethylcarbonates, polyiminocarbonates, poly(N-vinyl)-pyrrolidone, polyvinylalcoholes, polyesteramides, glycolated polyesters, polyphosphoesters, polyphosphazenes, poly[p-carboxyphenoxy]propane], polyhydroxypentanoic acid, polyanhydrides, polyethyleneoxide-propyleneoxide, soft polyurethanes, polyurethanes with amino acid moieties in the backbone, polyetheresters such as polyethyleneoxide, polyalkeneoxalates, polyorthoesters as well as their copolymers,

carrageenans, fibrinogen, starch, collagen, protein based polymers, polyamino acids, synthetic polyamino acids, zein, modified zein, polyhydroxyalkanoates, pectic acid, actinic acid, modified and non modified fibrin and casein, carboxymethylsulphate, albumin, moreover hyaluronic acid, heparansulphate, heparin, chondroitinesulphate, dextran,  $\beta$ -cyclodextrines and copolymers with PEG and polypropyleneglycol, gummi arabicum, guar, gelatin, collagen, collagen-N-Hydroxysuccinimide, modifications and copolymers and/or mixtures of the aforementioned substances.

45. (previously presented) Medical product according to claim 32, characterized in that the substances not participating in the polymerization reaction comprise antiproliferative, antiinflammatory and/or antithrombotic active agents chosen from the group comprising sirolimus (rapamycin), everolimus, pimecrolimus, somatostatin, tacrolimus, roxithromycin, dunaimycin, ascomycin, bafilomycin, erythromycin, midecamycin, josamycin, concanamycin, clarithromycin, troleandomycin, folimycin, cerivastatin, simvastatin, lovastatin, fluvastatin, rosuvastatin, atorvastatin, pravastatin, pitavastatin, vinblastine, vincristine, vindesine, vinorelbine, etoposide, teniposide, nimustine, carmustine, lomustine, cyclophosphamide, 4-hydroxycyclophosphamide, estramustine, melphalan, ifosfamide, trofosfamide, chlorambucil, bendamustine, dacarbazine, busulfan, procarbazine, treosulfan, temozolomide, thiotepa, daunorubicin, doxorubicin, aclarubicin, epirubicin, mitoxantrone, idarubicin, bleomycin, mitomycin, dactinomycin, methotrexate, fludarabine, fludarabine-5'-dihydrogenphosphate, cladribine, mercaptopurine, thioguanine, cytarabine, fluorouracil, gemcitabine, capecitabine, docetaxel, carboplatin, cisplatin, oxaliplatin, amsacrine, irinotecan, topotecan, hydroxycarbamide, miltefosine, pentostatin, aldesleukin, tretinoin, asparaginase, pegaspargase, anastrozole, exemestane, letrozole, formestane, aminoglutethimide, adriamycin, azithromycin, spiramycin, cepharantin, smc proliferation inhibitor-2w, epothilone A and B, mitoxantrone, azathioprine, mycophenolatmofetil, c-myc-antisense, b-myc-antisense, betulinic acid, camptothecin, PI-88 (sulfated oligosaccharide), melanocyte stimulating hormone ( $\alpha$ -MSH), activated protein C, IL-1 $\beta$  inhibitor, thymosine  $\alpha$ -1, fumaric acid and its esters, calcipotriol, tacalcitol, lapachol,  $\beta$ -lapachone, podophyllotoxin, betulin, podophyllic acid 2-ethylhydrazide, molgramostim (rhuGM-CSF), peginterferon  $\alpha$ -2b, lenograstim (r-HuG-CSF), filgrastim, macrogol,

dacarbazine, basiliximab, daclizumab, selectin (cytokine antagonist), CETP inhibitor, cadherines, cytokinin inhibitors, COX-2 inhibitor, NFkB, angiopeptin, ciprofloxacin, camptothecin, fluroblastin, monoclonal antibodies, which inhibit the muscle cell proliferation, bFGF antagonists, probucol, prostaglandins, 1,11-dimethoxycanthin-6-one, 1-hydroxy-11-methoxycanthin-6-one, scopoletin, colchicine, NO donors such as pentaerythritol tetranitrate and syndnocimines, S-nitrosoderivatives, tamoxifen, staurosporine,  $\beta$ -estradiol,  $\alpha$ -estradiol, estriol, estrone, ethinylestradiol, fosfestrol, medroxyprogesterone, estradiol cypionates, estradiol benzoates, tranilast, kamebakaurin and other terpenoids, which are applied in the therapy of cancer, verapamil, tyrosine kinase inhibitors (tyrphostines), cyclosporine A, paclitaxel and derivatives thereof such as 6- $\alpha$ -hydroxy-paclitaxel, baccatin, taxotere, synthetically produced as well as from native sources obtained macrocyclic oligomers of carbon suboxide (MCS) and derivatives thereof, mofebutazone, acetaminophen, diclofenac, lonazolac, dapsone, o-carbamoylphenoxyacetic acid, lidocaine, ketoprofen, mefenamic acid, piroxicam, meloxicam, chloroquine phosphate, penicillamine, tumstatin, avastin, D-24851, SC-58125, hydroxychloroquine, auranofin, sodium aurothiomalate, oxaceprol, celecoxib,  $\beta$ -sitosterin, ademetionine, myrtecamine, polidocanol, nonivamide, levomenthol, benzocaine, aescin, ellipticine, D-24851 (Calbiochem), colcemid, cytochalasin A-E, indanocine, nocodazole, S 100 protein, bacitracin, vitronectin receptor antagonists, azelastine, guanidyl cyclase stimulator, tissue inhibitor of metal proteinase-1 and -2, free nucleic acids, nucleic acids incorporated into virus transmitters, DNA and RNA fragments, plasminogen activator inhibitor-1, plasminogen activator inhibitor-2, antisense oligonucleotides, VEGF inhibitors, IGF-1; active agents from the group of the antibiotics such as cefadroxil, cefazolin, cefaclor, cefotaxim, tobramycin, gentamycin, penicillins such as dicloxacillin, oxacillin, sulfonamides, metronidazol, antithrombotics such as argatroban, aspirin, abciximab, synthetic antithrombin, bivalirudin, coumadin, enoxaparin, desulphated and N-reacetylated heparin, tissue plasminogen activator, GpIIb/IIIa platelet membrane receptor, factor X<sub>a</sub> inhibitor antibodies, heparin, hirudin, r-hirudin, PPACK, protamin, sodium salt of 2-methylthiazolidine-2,4-dicarboxylic acid, prourokinase, streptokinase, warfarin, urokinase, vasodilators such as dipyridole, trapidil, nitroprussides, PDGF antagonists such as triazolopyrimidine and seramin, ACE inhibitors such as captopril, cilazapril, lisinopril,

70. (previously presented) Medical product according to claim 68, wherein the stent is suitable to continuously release at least one antiproliferative, antiinflammatory, antiangiogenic and/or antithrombotic active agent.